

Transportation Forum

Climate Action Plan for Tempe 2050

October 30, 2018



Purpose of Forum

- What strategies could Tempe use to support a low-carbon transportation future?
- How can Tempe promote existing innovative transportation programs and projects?
- How can Tempe embrace autonomous vehicles and electric vehicles in our to further our transportation and climate goals?

Action Plan



As part of the City's Commitment with the Global Covenant of Mayors:

1. Letter of Intent from Mayor and Council
2. Complete a greenhouse gas emissions inventory
3. Will set a target to reduce GHG emissions
4. Develop Climate Action Plan on how Tempe will reduce GHG emissions

Community GHG Emissions Inventory completed

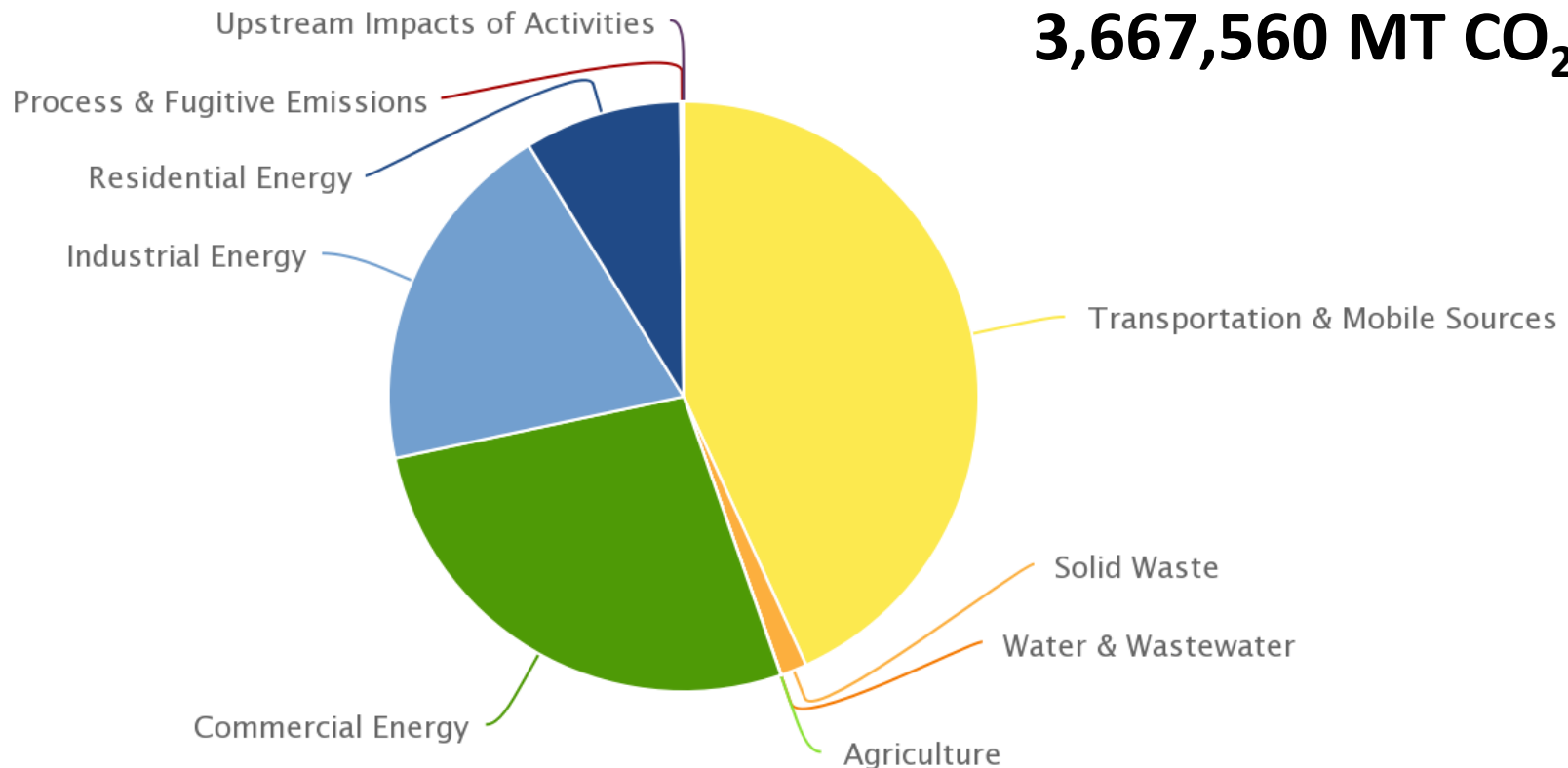
- If you can't measure it you can't manage it
- Sets a baseline to set reduction targets
- Identifies major sources of emissions
- Measures effectiveness of programs over time



Tempe's Community Greenhouse Gas Inventory

CO₂e across all categories for current inventory

Total Emissions:
3,667,560 MT CO₂e



What Does a “Climate Action Plan” look like in Tempe?

- New **goal** for carbon reduction
- New **goal** for resilience to extreme heat
- Menu of **potential investments** (Including projects in current CIP, and projects to put in year 5 before next bond authorization)
- Develop **community support, and data** to support actions and investments (Partnership with ASU)



Tempe.

Climate Action Plan Benefits for Tempe

A Climate Action Plan helps to develop strategies to conserve resources and make quality of life improvements such as:

- Develop energy efficiency programs to lower utility costs
- Increase light rail, bus, and bike paths to reduce pollution and traffic congestion while also reducing greenhouse gas emissions
- Implement an urban tree program to provide shade, reduce carbon, and reduce urban heat island impacts.



Tempe.

What Areas Does a Climate Plan Address?

- Emissions reduction
 - Energy (Efficiency and renewables)
 - Transportation (Including city fleet and transit)
 - Water
 - Waste
 - Food
- Resilience
 - Extreme heat (Prevention and emergency response)



What Areas Does a Climate Plan Address?

- Transportation
 - 20-minute city/transportation options
 - Electric vehicles
 - Autonomous vehicles



Who is Tempe?

- Land locked
- Fast growing
- 40 square miles
- Regional destination
- Night time v. day time population (190K v. 321K)
- Roadway network built out




How do we accommodate growth?

- Limited opportunities for roadway capacity improvements
- Underutilized non-roadway infrastructure
- Diversifying roadway functions
- Moving of people and goods



What is the 20-minute City?

- General Plan, Transportation Master Plan, and Council Strategic Initiative
- Walking, biking and transit connections between homes and hubs of activity



Seeking the 20-minute city

A 20-minute city is characterized by a vibrant mix of commercial and residential establishments within a

**1-mile walking distance,
4-mile bike ride or
20-minute transit ride.**

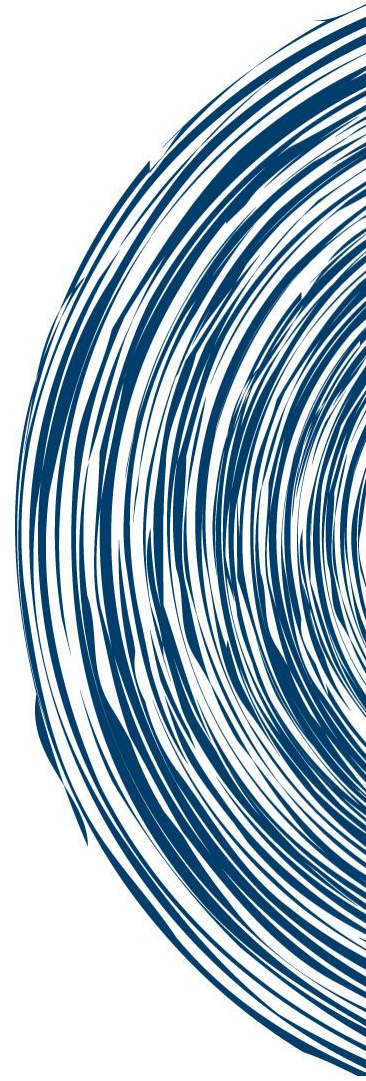
The 20-minute city premise is at the core of planning for traditional neighborhood design, transit-oriented development and complete streets. A few of the many benefits of the 20-minute city are reduced transportation costs, reduced greenhouse gas emissions, improved public health and improved access to residents' daily needs.

The background features a large, light blue circle in the center. This circle is surrounded by a series of concentric, wavy lines in shades of blue and yellow, creating a dynamic, swirling effect that frames the central text.

Your thoughts...

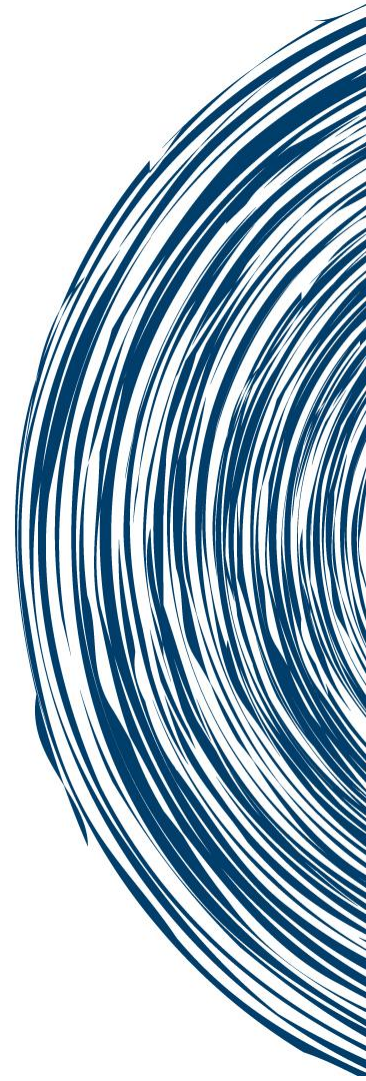
Where do people want to go?

- Daily Necessity Destinations
- Quality of Life Destinations
- **Are we missing anything?**
- **Which destinations are the top priorities?**



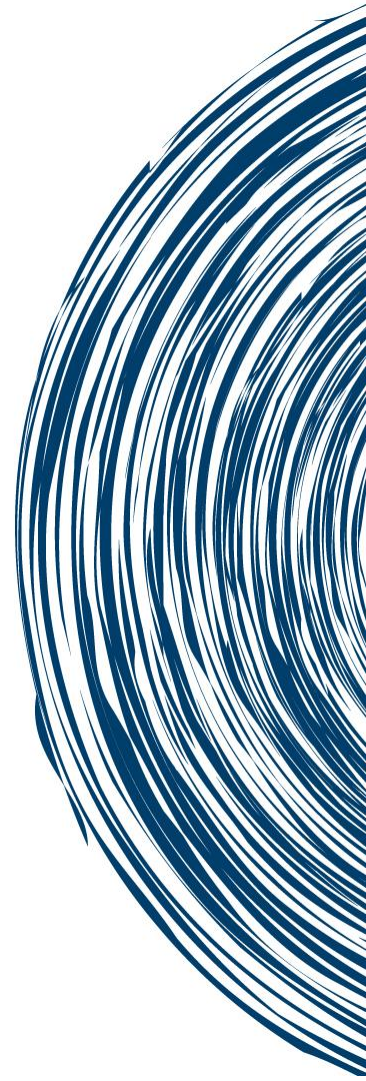
Why don't you walk, bike, take transit, or carpool?

- Safety
- Access
- Proximity
- Travel time
- Convenience
- Predictability
- Level of stress
- Incentivization
- Transportation costs



What investments will get you out of your car?

- Enhanced/dedicated bicycle facilities
- Improved transit service frequency
- Expanded transit service area
- Enhanced pedestrian realm
- Roadway reconfiguring
- First/last mile program
- Reliable information





Thank You

 **Robert Yabes**
City of Tempe Public Works
Transportation Planning Manager

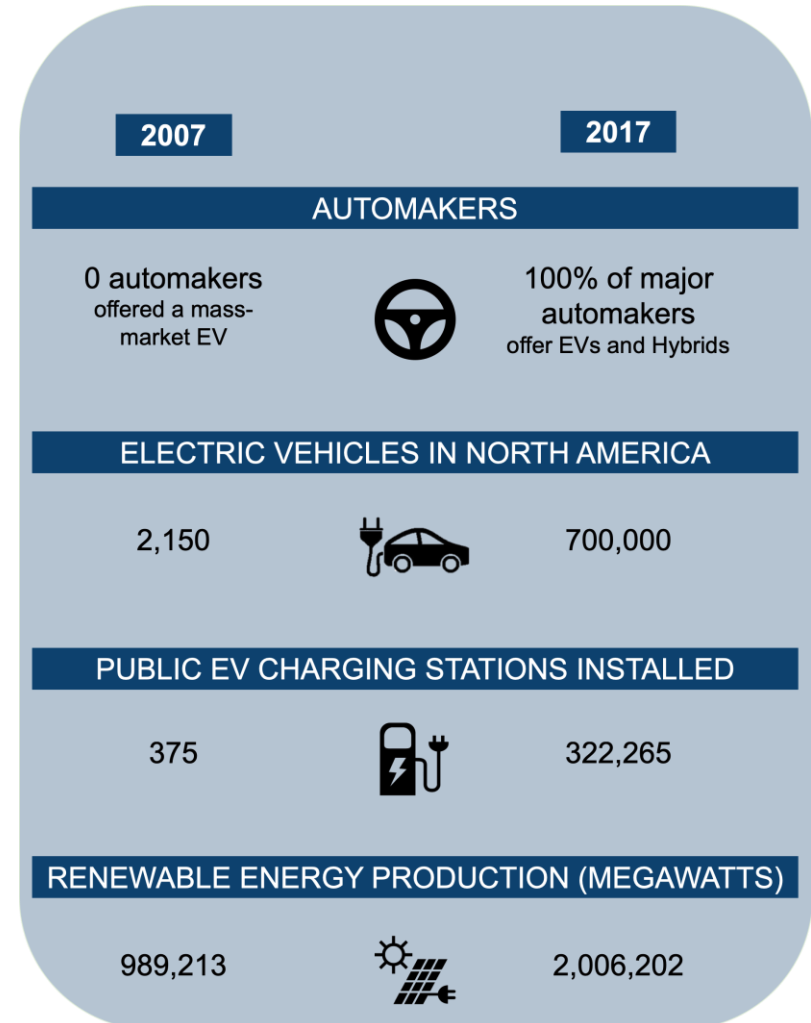
 **Vanessa Spartan, AICP**
City of Tempe Public Works
Transportation Planner





Electric Vehicles

- Approximately 1 million electric vehicles (EVs) are on US-roads today
- By 2025, 25% of vehicles sold in the US will be electric
- More and more states encourage EV driving by offering incentives such as tax credits, HOV lane access (not yet available in AZ), utility rebates, and special rate plans for EV charging
- Public and private employers across the US increasingly provide EV charging infrastructure



What would make you purchase an electric vehicle?



- Prioritized parking
- Low-cost charging at home
- Low-cost charging away from home
- Quick charging on the go
- Roadway prioritization
- Public transportation perks
- Improved information
- Vehicle alternatives
- U-haul partnership
- Uber/lyft discounts





Automated Vehicles

- An automated vehicle (AV) drives itself with limited or no human control, using a combination of sensors and cameras
- AVs are presently being tested on Phoenix area roads
- AVs are promoted for being significantly safer than human drivers, potentially removing human error as the cause of 94% of accidents
- Fleet and shared AVs could reduce traffic, congestion, and GHG emissions
- Microtransit AVs can supplement existing public transit and reduce the need for single occupancy driving





How would you use an AV in Tempe?

- Shared vehicles
- Ride-sharing service with AVs
- AV micro-transit or neighborhood circulator
- AV public buses
- Private AVs



Forum Instructions

Locations:

- 20-minute City
 - Electric Vehicles
 - Autonomous Vehicles
- } Located outside on the landing
- } Located inside Don Cassano Room

How to provide input:

- 20-minute City
 - Electric Vehicles
 - Autonomous Vehicles
- } Place dots on the responses of your choice
Provide further feedback on sticky notes
- • •
- } If you support the proposed actions on the poster, select a green sticky note and provide more detailed feedback. You do not support the action, select a red sticky note and provide more detailed feedback.



Questions?

- Facilitators are located at each poster to help you provide input.



Engagement

- In order to effectively communicate our goals for a sustainable future to the widest possible range of people, the city of Tempe will utilize the following forms of engagement:
 - Interviews
 - Satellite Events and Online Forum
 - Forums
 - Engagements with City Departments



Timeline

Spring 2018

Summer 2018

Fall 2018

October 2018

November 2018

February 2019

Spring 2019

Summer 2019

Fall 2019

Internal Interviews

External Interviews & Engagement Prep

Public engagement at Satellite Events

Online Forum

Engagements with City Departments

Forum on *Energy* Actions

Forum on *Transportation* Actions

Forum on *Urban Systems* Actions

Draft Climate Action Plan

Finalize Plan

Council Adoption



Questions

1. How can the City of Tempe use the Climate Action Plan to promote and support existing efforts?
2. How can Tempe use the Climate Action to promote emerging technologies and investments like Streetcar, Anaerobic Digestion, Electric Vehicles?
3. Should Tempe adopt the same Carbon reduction goal as Phoenix (Carbon neutral by 2060) or should it set a more aggressive target?
4. How can Tempe support carbon reduction while keeping energy costs low and supporting economic growth?
5. How can Tempe adapt to increasing extreme heat?